



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200  
Fax 613 632-5246

**D3016-15**  
**Job Sheet 182044**



Part No: D3016-15

Job Qty: 20 ea

Part Name: Gusset



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 8/16/18

Job Tracking No:

Due Date: 8/31/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG REV A IPP B 03.05.09 Reformat KJ/RF IPP Rev:C 08-04-11 now made on water jet DD verified by:EC  
Ship Via:

### Bill of Materials

### Job Routing

| Op No | Operation          | Qty    | Start Date | Due Date | Standard  |         | Workcenter/Supplier   |           | Sign-off    |
|-------|--------------------|--------|------------|----------|-----------|---------|-----------------------|-----------|-------------|
|       |                    |        |            |          | Setup hrs | Run Hrs | Workcenter / Supplier | Lead Time |             |
| 90    | Start up Operation | 20 Ea  | 8/31/18    | 8/31/18  | 0.00      | 0.00    | Start Up Waterjet     |           | ac 18/08/16 |
| 100   | Waterjet           | 20 pcs | 8/31/18    | 8/31/18  | 0.02      | 0.60    | Waterjet1             |           | ac 18/08/16 |
| 120   | QC                 | 20 pcs | 8/31/18    | 8/31/18  | 0.00      | 0.00    | QC8                   |           | AUG 17 2018 |
| 130   | Packaging          | 20 pcs | 8/31/18    | 8/31/18  | 0.00      | 0.00    | Packaging3            |           | cz          |
| 140   | QC21-SA            | 20 Ea  | 8/31/18    | 8/31/18  | 0.00      | 0.00    | QC21                  |           |             |

Part Op 100 - 1-Cut as per Dwg D3016

Descriptions: 130 - Identify and bag with light oil (Vactra oil #2), then Stock \*\*\*\*\*STOCK IN LARGE FAB\*\*\*\*\*

### Job BOM

| Part / Item | Component Name  | Quantity            | Operation             | Container  |
|-------------|-----------------|---------------------|-----------------------|------------|
| M4130NS.049 | 4130 Sheet .049 | .9720 sf (.0486 ea) | 90-Start up Operation | SB F124283 |

### Job Allocations

| Operation             | Component Part | Required | Inventory | Allocated |
|-----------------------|----------------|----------|-----------|-----------|
| 90-Start up Operation | M4130NS.049    | 1        | 0         | 0         |

### Part Specifications

| Spec No | Description | Target/Tolerance    | Limits         | Type | Special Comments |
|---------|-------------|---------------------|----------------|------|------------------|
| 1       | Gusset      | 2.500Inches ± 0.030 | 2.530<br>2.470 |      |                  |
| 2       | Gusset      | 2.500Inches ± 0.030 | 2.530<br>2.470 |      |                  |
| 3       | Gusset      | 0.150Inches ± 0.030 | 0.180<br>0.120 |      |                  |
| 4       | Gusset      | 0.150Inches ± 0.030 | 0.180<br>0.120 |      |                  |
| 5       | Gusset      | 0.450Inches ± 0.010 | 0.460<br>0.440 |      |                  |
| 6       | Gusset      | 0.049Inches ± 0.010 | 0.059<br>0.039 |      |                  |



DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|-----------|------------|-----------|-------------|--------------|-----------------------|-------------------|----------|--------|--------------|---------------------|------------------------|----------|-----------------|----------|--------------------|------------------|----------|------------------|---------|------------|-----|---------------------|--------------------|------------|---------------------|---------------|------------------|-----------------------|--|---------------|----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|------------------|------------------|---------------|--------------------|-------|----------------------|------|----------------|--------------------|-------------------|-----------------|------------|---------|---------|------------|--------|--------------|---------|-----------------------|------------------|
| Work Order: _____<br>Part No. _____<br>NCR No. _____<br>Date : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                       | <b>AGAINST DEPARTMENT/PROCESS</b><br><table style="width: 100%;"> <tr> <td style="width: 15%;">Skid-tube</td> <td style="width: 15%;">Cross tube</td> <td style="width: 15%;">Water Jet</td> <td style="width: 15%;">Engineering</td> </tr> <tr> <td>Chining</td> <td>Small Fab</td> <td>Prod. Eng. Coord.</td> <td>Quality</td> </tr> <tr> <td>ing</td> <td>Finishing</td> <td>Rec/Store/Packaging</td> <td>Other</td> </tr> <tr> <td></td> <td>Composite</td> <td>Supplier</td> <td></td> </tr> </table> |                    |                 | Skid-tube | Cross tube | Water Jet | Engineering | Chining      | Small Fab             | Prod. Eng. Coord. | Quality  | ing    | Finishing    | Rec/Store/Packaging | Other                  |          | Composite       | Supplier |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| Skid-tube                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Cross tube            | Water Jet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Engineering        |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| Chining                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Small Fab             | Prod. Eng. Coord.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Quality            |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| ing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Finishing             | Rec/Store/Packaging                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Other              |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Composite             | Supplier                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| <div style="position: relative;"> <div style="position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%);"> <p>Container No: S103100<br/>           Part: D3016-15<br/>           Job No: 182044<br/>           Serial No/Batch: S103100<br/>           Revision:<br/>           Inspector:<br/>           Exp Date:<br/>           Instructions: Various STC's</p> </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                       | MRB (QSI042) Approval<br><br>Completed By<br><br>Lead hand / Supervisor<br>Approval Verification<br><br>QC / QA Coordinator<br>Approval                                                                                                                                                                                                                                                                                                                                                                    |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| <b>Root Cause</b><br><table style="width: 100%;"> <tr> <td style="width: 33%;">Environment</td> <td style="width: 33%;">No Re-verification</td> <td style="width: 33%;">Pressure/Forced</td> </tr> <tr> <td>Design</td> <td>Operator</td> <td>Bending</td> </tr> <tr> <td>Doc/Data</td> <td>Offset/Setup</td> <td>Centre Not Concentric</td> </tr> <tr> <td>Equip/Tooling</td> <td>Supplier</td> <td>Cracks</td> </tr> <tr> <td>Handling/Pre</td> <td>Training</td> <td>Crimp/Kink/Ripple/Wave</td> </tr> <tr> <td>Material</td> <td>Use for Testing</td> <td>Cuffs</td> </tr> <tr> <td>Internal Transport</td> <td>Poor Information</td> <td>Crushing</td> </tr> <tr> <td>Tribal Knowledge</td> <td>Rushing</td> <td>Heat Treat</td> </tr> <tr> <td>LOA</td> <td>Product Improvement</td> <td>Wave/Twist in Tube</td> </tr> <tr> <td>Substation</td> <td>Process Improvement</td> <td>Marks/Chatter</td> </tr> <tr> <td>Past Expiry Date</td> <td>Manufacturing Process</td> <td></td> </tr> <tr> <td>Misidentified</td> <td>Past Due</td> <td>OTHER :</td> </tr> </table> |                       | Environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No Re-verification | Pressure/Forced | Design    | Operator   | Bending   | Doc/Data    | Offset/Setup | Centre Not Concentric | Equip/Tooling     | Supplier | Cracks | Handling/Pre | Training            | Crimp/Kink/Ripple/Wave | Material | Use for Testing | Cuffs    | Internal Transport | Poor Information | Crushing | Tribal Knowledge | Rushing | Heat Treat | LOA | Product Improvement | Wave/Twist in Tube | Substation | Process Improvement | Marks/Chatter | Past Expiry Date | Manufacturing Process |  | Misidentified | Past Due | OTHER : | <b>RY</b><br><table style="width: 100%;"> <tr> <td style="width: 33%;">Power Loss/Surge</td> <td style="width: 33%;">Positioned Wrong</td> </tr> <tr> <td>Folio/Program</td> <td>Outside Dimensions</td> </tr> <tr> <td>Grain</td> <td>Over/Under tolerance</td> </tr> <tr> <td>Weld</td> <td>Part Incorrect</td> </tr> <tr> <td>Wrong Stock Pulled</td> <td>Part Lost/Missing</td> </tr> <tr> <td>Out of Sequence</td> <td>Part Moved</td> </tr> <tr> <td>Off-set</td> <td>Drawing</td> </tr> <tr> <td>Mislabeled</td> <td>Finish</td> </tr> <tr> <td>Fit/Function</td> <td>Misread</td> </tr> <tr> <td>Misaligned/off center</td> <td>Turning Sequence</td> </tr> </table> |  |  | Power Loss/Surge | Positioned Wrong | Folio/Program | Outside Dimensions | Grain | Over/Under tolerance | Weld | Part Incorrect | Wrong Stock Pulled | Part Lost/Missing | Out of Sequence | Part Moved | Off-set | Drawing | Mislabeled | Finish | Fit/Function | Misread | Misaligned/off center | Turning Sequence |
| Environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No Re-verification    | Pressure/Forced                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| Design                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Operator              | Bending                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| Doc/Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Offset/Setup          | Centre Not Concentric                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| Equip/Tooling                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Supplier              | Cracks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| Handling/Pre                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Training              | Crimp/Kink/Ripple/Wave                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| Material                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Use for Testing       | Cuffs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| Internal Transport                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Poor Information      | Crushing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| Tribal Knowledge                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Rushing               | Heat Treat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| LOA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Product Improvement   | Wave/Twist in Tube                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| Substation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Process Improvement   | Marks/Chatter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| Past Expiry Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Manufacturing Process |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| Misidentified                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Past Due              | OTHER :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| Power Loss/Surge                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Positioned Wrong      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| Folio/Program                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Outside Dimensions    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| Grain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Over/Under tolerance  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| Weld                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Part Incorrect        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| Wrong Stock Pulled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Part Lost/Missing     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| Out of Sequence                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Part Moved            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| Off-set                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Drawing               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| Mislabeled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Finish                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| Fit/Function                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Misread               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |
| Misaligned/off center                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Turning Sequence      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                 |           |            |           |             |              |                       |                   |          |        |              |                     |                        |          |                 |          |                    |                  |          |                  |         |            |     |                     |                    |            |                     |               |                  |                       |  |               |          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                  |                  |               |                    |       |                      |      |                |                    |                   |                 |            |         |         |            |        |              |         |                       |                  |